

CLAIMS

1. Device for detecting end of paper for a printer (10), wherein said paper (12) is wound on a roll (14) placed in a housing (15), said roll (14) being suitable for assuming different positions in said housing (15), respectively when said printer is in a first (P1), or in a second (P2) operating position, said detecting device comprising sensor means (54, 58, 60) suitable for cooperating with a sprocket (17) of said roll (14), when said roll contains a predetermined minimum length of paper, **characterized in that** said sensor means comprise a lever (54) movable with respect to said housing, comprising two arms (55, 56) bearing at one end a respective projecting element (58, 60), each projecting element (58, 60) being suitable for engaging a hole (19) in said sprocket (17), respectively when said printer (10) is in said first (P1), or in said second (P2) operating position.
2. Device as in claim 1, **characterized in that** said lever (54) is fulcrum-mounted on a support (43) mounted on a wall (26) of said housing (15), said lever (54) assuming one or the other of two angular positions according to a plane perpendicular to said wall (26), respectively when said projecting elements (58, 60) are lying against the edge of said roll (14), or when only one of said projecting elements (58, or 60) engages the hole (19) in said sprocket 17.
3. Device as in claim 2, **characterized in that** said support (43) is linearly sliding on said wall (26) and is moved by a cam-type regulating member (46, 47), rotating on said wall (26), to adapt the position of each of said projecting elements (58, 60) to different dimensions of said sprocket (17).

4. Device as in any of the previous claims, **characterized in that** said lever (54) cooperates with a microswitch (68) to generate an end of paper signal when one or the other of said projecting elements (58, or 60) engages the hole (19) in said sprocket (17).

5 5. Device as in any of the previous claims, **characterized in that** said two arms (55, 56) of said lever (54) are reciprocally spread apart and together form an angle of about 120°.

6. Device as in any of the previous claims, **characterized in that** said two arms (55, 56) are sized in such a way that only one of said projecting elements (58, or 60) can engage said hole (19), respectively in each of said operating positions of said printer (10).

7. Device as in any of the previous claims, **characterized in that** said housing (15) is provided with at least two groups of support surfaces (30, 31 and 32, 33), the support surfaces of each of said groups being suitable for supporting said roll (14), respectively when said printer (10) is in said first, or in said second operating position.

8. Printer (10) for receipts made from a paper tape (12) wound on a roll (14) placed in a housing (15) of said printer (10), said roll (14) being suitable for assuming different positions in said housing (15), respectively when said printer is in a first (P1), or in a second (P2) operating position, said printer comprising a printing group for printing information on said receipts, a cutting unit for separating said receipts from said paper tape, and a device for detecting end of paper comprising sensor means (54, 58, 60) suitable for cooperating with a sprocket (17)

of said roll (14), when said roll contains a predetermined length of paper, said printer being **characterized in that** said sensor means (54, 58, 60) comprise a lever (54) that is movable with respect to said housing, provided with two arms (55, 56) bearing at one end a projecting element (58, 60), each projecting element (58, 60) being suitable for engaging a hole (19) in said sprocket (17), respectively when
5 said printer (10) is in said first (P1), or in said second (P2) operating position.